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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/822,148

04/08/2004

Peidong Yang

UC03-392-2

1159

8156

7590

10/24/2006

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EXAMINER

DICKEY, THOMAS L

ART UNIT

PAPER NUMBER

2826

DATE MAILED: 10/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/822,148

Applicant(s)

YANG ET AL.

Examiner

Thomas L. Dickey

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-15,57-60,69-79,100-114 and 116-130 is/are pending in the application.
- 4a) Of the above claim(s) 15,57-60,69-79,100-109 and 119-130 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-14,110-114 and 116-118 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This rejection is non-final due to some claims being rejected over art not previously cited.
2. The amendment filed on 8/2/06 has been entered.

Election/Restriction

3. Applicant's election without traverse of the Group II invention, claims 1, 5-14, 110-114, and 116-119 (as filed. Applicant having filed no claim 115, technically the claims Applicant numbered 116-130 are actually 115-129), in the Paper filed 8/2/06, is acknowledged.

Claim Objections

4. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 116-130 have been renumbered 115-129.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5-14, 110-114, and 116-118 are rejected under 35 U.S.C. 102(b) as being anticipated by HOFFMAN ET AL. (6,113,722).

Hoffman et al. discloses a nanodevice formed by a process comprising steps of forming a single-crystalline core material (Hoffman et al. simply and straightforwardly refer to Applicants' long, thin "core material" as a "fiber") comprising a material (carbon, graphite, polymer, metal, glass, ceramic, or other tube forming fibers," note column 2 lines 60-67) selected from the group of materials consisting essentially of zinc oxide (ZnO), silicon (Si), gallium nitride (GaN), germanium (Ge), silver (Ag), gold (Au), group II-VI materials, group III-V materials, elemental group IV materials, and metals, and comprising a sacrificial template for said nanotube; depositing a single-crystalline nanotube material (Hoffman et al. simply and straightforwardly refer to Applicants' "nanotube material" as a "surface coating," because it coats the fiber (pardon me, "core material")) comprising a material, for example, silica, sapphire, various metals, etc. (note column 3 lines 1-10) selected from the group of materials consisting essentially of GaN, Si, GaAs, CdSe, GaP, InP, Ge, InAs, Group II, III, IV, V, and VI materials including quaternaries and tertiaries, as well as oxides, SiO, GaO, InO and other insulating materials, elemental metals, and polymers over said core material ("fiber"), wherein said

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core material ("fiber") has ends and a side surface; and wherein said nanotube material ("surface coating") is deposited on said side surface to form a cylindrical sheath through which said core material ("fiber") extends, and wherein the material selected for said nanotube material ("surface coating") has a sufficiently similar crystalline structure and lattice constant as the material selected for said core material ("fiber") to allow epitaxial growth of said nanotube material ("surface coating") on said core material ("fiber"); and removing said core material ("fiber") while said core material ("fiber") is sacrificed; said nanodevice comprising a tubular member having first and second ends, and an inner bore, said tubular member having two ends, between said first and second ends; said tubular member having a non-porous inner wall (Applicant is asked to please not jump to conclusions from the recital in the abstract that "The wall layers may be porous for the purpose of removing the fiber therethrough," As is explained in column 7 lines 38-43, during manufacture the wall layers optionally may be temporarily made porous for a particular purpose, but if this optional step is employed the walls are then made non-porous (impervious) in the final product); said tubular member comprising silica (note column 2 line 26), which is a non-carbon, hydrophilic material. Note figures 5,6, column 2 lines 60-67, column 3 lines 10-60, column 4 lines 1-40, column 7 lines 25-42, and column 8 lines 7-40 of Hoffman et al. Note that applicants admit that silica is inherently hydrophilic at page 3 paragraph 0013 of their application.

Response to Arguments

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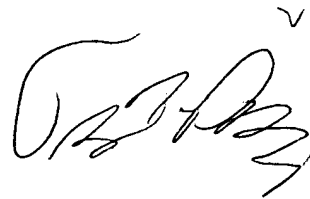
~~4~~ Applicant's arguments with respect to claims 1-14, 110-114, and 116-119 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas L Dickey whose telephone number is 571-272-1913. The examiner can normally be reached on Monday-Thursday 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thomas L. Dickey
Primary Examiner
Art Unit 2826